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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,975	06/27/2005	Masami Nishikawa	42479-8600	5651
21611 7590 09/17/2007 SNELL & WILMER LLP (OC) 600 ANTON BOULEVARD SUITE 1400 COSTA MESA, CA 92626			EXAMINER KRISHNAMURTHY, RAMESH	
			ART UNIT 3753	PAPER NUMBER
			MAIL DATE 09/17/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/507,975

Applicant(s)

NISHIKAWA ET AL.

Examiner

/Ramesh Krishnamurthy/

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 15 - 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15 - 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

This office action is responsive to communications filed July 31, 2007.

**Claims 15 - 30 are pending.**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 15 - 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ollivier (US 6,363,958) in view of Tsourides (US 2202/0038673) and further in view of Porter et al. (US 2002/0124961).

Ollivier discloses a semiconductor production assembly (2) utilizing a source of fluid, the mass flow control module (10) that can control fluid flow and be installed as a unitary component, comprising: a housing block member having a fluid passageway (1) connected to the source of fluid, mounted on the housing block member from an upstream position is a pressure control valve unit (16), a flow rate sensor unit and a flow

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rate control valve unit (22) (a conventional mass flow controller includes a flow controller and a flow sensor); a pressure sensor unit (16) operatively mounted in the fluid passageway; and a control unit (3) operatively connected to the pressure control valve unit, the flow rate sensor unit, the flow rate control valve unit and the pressure sensor unit whereby the control unit can automatically set and maintain a constant flow rate despite changes in fluid pressure. A second pressure sensor unit (6) is mounted between the pressure control valve (16) and the flow rate sensor (in (22)) and operatively connected to the control unit (3).

The patent to Ollivier discloses the claimed invention with the exception of explicitly disclosing the housing block member to include in a consecutive and adjacent arrangement a pressure control valve, a flow rate sensor and a flow control valve.

Tsourides discloses an integrated flow control arrangement that includes a housing block base (38) for providing a modular interface with a pressure control valve (14), a flow rate sensor and a flow control valve (i.e. solenoid valve) (See Fig. 3), thereby reducing external piping connections and presenting a reduced foot print for the valve assembly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in Ollivier a housing block member having a modular interface with a pressure control valve, a flow rate sensor and a flow control valve, for the purpose of providing a modular interface with a pressure control valve, a flow rate sensor and a flow control valve, thereby reducing external piping connections and presenting a reduced foot print for the valve assembly.

The combination of Ollivier and Tsourides discloses the claimed invention with the exception of explicitly disclosing the flow control valve to have a diaphragm member.

Porter et al. discloses a manifold fluid delivery system comprising a flow sensor (56) and a flow control valve (54) comprising a diaphragm for the purpose of providing a suitable valving interface to the fluid flow therethrough.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the combination of Ollivier and Tsourides a flow control valve (54) comprising a diaphragm for the purpose of providing a suitable valving interface to the fluid flow therethrough. It should be noted that Ollivier discloses the mass flow controller (22) to be a conventional one and as such would include all known types of mass flow controller including the one with a diaphragm as taught in Porter et al.

It is noted that Tsourides discloses a filter arrangement (Figs. 5A – 5C) wherein a filter could be placed upstream of various components on the housing block for the purpose of providing a clean supply of fluid to the component.

In regard to specific arrangement (as recited in claims 20 – 28, for example) of the various gas flow components such as pressure sensor, pressure control valve as being disposed either one side or the other of the housing block, in this office action such placements are being regarded as mere design expedients over those features disclosed in the combination set forth above in that such placements neither provide any new and/or unexpected results nor solve any stated problem.

***Response to Arguments***

4. Applicant's arguments with respect to claims 15 - 30 have been considered but are generally moot in view of the new ground(s) of rejection. In regard to specific arguments concerning the Ollivier reference concerning fluctuations in pressure, it is noted these arguments are moot in that they pertain to limitations not recited presently in the claims.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (571) 272 - 4914. The examiner can normally be reached on Monday - Friday from 10:00 AM to 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson, can be reached on (571) 272 - 4887. The fax phone

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number for the organization where this application or proceeding is assigned is (571) 273 – 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*/Ramesh Krishnamurthy/*

Ramesh Krishnamurthy

Primary Examiner

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